Charles E. Tucker

Application No.: 10/057,826

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## IN THE CLAIMS:

All claims pending, including those unchanged by the present amendment, are reproduced below for the convenience of the Examiner.

1 (Original) A process for the preparation of a nonracemic diastereomer

2 selected from 1-(4-hydroxy-phenyl)-2-(4-hydroxy-4-phenyl-piperidin-1-yl)-1-propanol

3 compounds of the structural formula I and stereoisomers thereof,

4

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5 wherein R is selected from hydrogen and hydroxyl protecting groups, comprising hydrogenating

a corresponding nonracemic ketone selected from 1-(4-hydroxy-phenyl)-2-(4-hydroxy-4-phenyl-

Ι

II

7 piperidin-1-yl)-1-propanone compounds of the structural formula II and enantiomers thereof,

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9 in the presence of a catalyst system comprising ruthenium, a nonracemic diphosphine ligand, a

bidentate amine ligand selected from amino-thioethers and achiral diamines, and a base.

1 2. (Original) The process of claim 1 wherein the nonracemic diphosphine

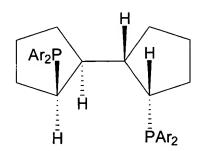
2 ligand comprises a 2,2'-bis(diorganophosphino)-1,1'-bis(cyclic) structure.

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1 3. (Original) The process of claim 2 wherein the nonracemic diphosphine 2 ligand is selected from enantiomers of diphosphine ligands having the structural formula



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4 wherein Ar is an aryl group.

- 1 4. (Original) The process of claim 3 wherein Ar is phenyl.
- 5. (Original) The process of claim 1 wherein the bidentate amine ligand is an amino-thioether.
- 1 6. (Original) The process of claim 5 wherein the amino-thioether is a 2-(alkylthio)aniline.
- 7. (Original) The process of claim 6 wherein the 2-(alkylthio)aniline is selected from 2-(methylthio)aniline and 2-(ethylthio)aniline.
- 1 8. (Original) The process of claim 1 wherein the bidentate amine ligand is 2 an achiral diamine.
- 9. (Original) The process of claim 8 wherein the achiral diamine comprises no chiral carbon centers.
- 1 10. (Original) The process of claim 8 wherein the achiral diamine is a 1,2-2 phenylene-diamine.
- 1 11. (Original) The process of claim 1 wherein the base is selected from basic 2 inorganic and organic salts, alkylguanidines, aminophosphazenes, and proazaphosphatranes.

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2-(alkylthio)aniline ligand, and a base.

**12**. (Original) The process of claim 11 wherein the base is selected from 1 2 alkylguanidines, aminophosphazenes, and proazaphosphatranes. (Original) The process of claim 12 wherein the base is an alkylguanidine. 1 **13**. 1 14. (Original) The process of claim 13 wherein the base is a 2 pentaalkylguanidine. (Original) The process of claim 1 wherein the hydroxyl protecting group 1 **15**. 2 is benzyl. (Original) The process of claim 15 wherein the diastereomer is a syn-1 **16**. 2 diastereomer. (Original) The process of claim 16 wherein the syn-diastereomer is the 1 17. 2 (1S,2S) diastereomer. 1 18. (Original) The process of claim 16 wherein the syn-diastereomer is 2 formed in at least about 90% diastereomeric excess. 1 **19**. (Original) A process for the preparation of (1S,2S)-1-(4-benzoxy-phenyl)-2-(4-hydroxy-4-phenyl-piperidin-1-yl)-1- by catalytic hydrogenation of (2S)-1-(4-benzyl-2 phenyl)-2-(4-hydroxy-4-phenyl-piperidin-1-yl)-1-propanone using a catalyst system comprising 3 4 ruthenium, a (S,S,S,S)-2,2'-bis-(diarylphosphino)-1,1'-dicyclopentane ligand, a 1,2-phenylene diamine ligand, and a base. 5 20. (Original) A process for the preparation of (1S,2S)-1-(4-benzoxy-phenyl)-1 2 2-(4-hydroxy-4-phenyl-piperidin-1-yl)-1- by catalytic hydrogenation of (2S)-1-(4-benzyl-3 phenyl)-2-(4-hydroxy-4-phenyl-piperidin-1-yl)-1-propanone using a catalyst system comprising ruthenium, a (S,S,S,S)-2,2'-bis-(diarylphosphino)-1,1'-dicyclopentane ligand, a 4